Application No.: 09/838,436

Office Action Dated: May 12, 2005

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for generating a data stream according to a binary format of a tag-based description language, comprising:

tokenizing tag names into numeric tokens for use in the data stream, wherein binary format allows for incremental output and parsing of the data stream without forcing the creation of tables at the beginning of the stream the numeric tokens are in incrementally consumable form.

- 2. (original) A method according to claim 1, further comprising: tokenizing attribute names into numeric tokens.
- 3. (original) A method according to claim 1, wherein said numeric tokens for tag names are variable sized.
- 4. (original) A method according to claim 2, wherein said numeric tokens for attribute names are variable sized.
- 5. (original) A method according to claim 2, wherein said tokenizing of attributes enables values natively stored as binary data types to be inserted into the data stream.
- 6. (original) A method according to claim 1, wherein said tokenizing of tag names includes inserting a name definition construct into the data stream the first time a tag name is encountered for purposes of recreating the tag names by a device that receives the data stream.
- 7. (original) A method according to claim 1, wherein the tag-based description language is extensible markup language (XML).
- 8. (original) A method according to claim 2, wherein the tokenizing of the tag and attribute names decreases the time elapsed parsing the data stream by a device that receives the data stream, the time being decreased relative to the parsing of a corresponding text-based format of the tag-based description language.

Application No.: 09/838,436
Office Action Dated: May 12, 2005

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

9. (original) A method according to claim 2, wherein the tokenizing of the tag and attribute names decreases overhead incident to formatting data for representation according to the tag-based description language.

- 10. (original) A method according to claim 2, wherein the tokenizing of the tag and attribute names decreases the size of the resulting data file formatted according to the tagbased description language.
- 11. (original) A computer readable medium bearing computer executable instructions for carrying out the method of claim 1.
- 12. (currently amended) A computer readable medium bearing computer executable instructions for carrying out the method of receiving a well-formed document in a text format of a tag-based description language and converting the document to a binary format via tokenization of the tag and attribute names into numeric tokens, wherein the binary format allows for incremental output and parsing of the document without forcing the creation of tables at the beginning of the document the numeric tokens are in incrementally consumable form.
- 13. (original) A computer readable medium according to claim 12, wherein said tokenization of attributes enables values natively stored as binary data types to be inserted into the data stream.
- 14. (original) A computer readable medium according to claim 12, wherein said tokenization of tag names includes inserting a name definition construct into the data stream the first time a tag name is encountered for purposes of recreating the tag names by a device that receives the data stream.
- 15. (original) A computer readable medium according to claim 12, said receiving includes receiving a document formatted according to a text format of XML.
- 16. (currently amended) A computer readable medium bearing computer executable instructions for carrying out the method of assembling data into a document according to a binary format by tokenizing the tag and attribute names into variable sized numeric tokens,

**Application No.:** 09/838,436

Office Action Dated: May 12, 2005

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

wherein the binary format allows for incremental output and parsing of the data without forcing the creation of tables at the beginning of the data the numeric tokens are in incrementally consumable form.

- 17. (original) A computer readable medium according to claim 16, wherein said tokenizing of attributes enables values natively stored as binary data types to be inserted into the data stream.
- 18. (original) A computer readable medium according to claim 16, wherein said tokenizing of tag names includes inserting a name definition construct into the data stream the first time a tag name is encountered for purposes of recreating the tag names by a device that receives the data stream.
- 19. (original) A computer readable medium according to claim 16, said receiving includes receiving a document formatted according to a text format of XML.
- 20. (currently amended) A computer readable medium bearing computer executable instructions for carrying out the method of receiving a document formatted according to a binary format of a tag-based description language, wherein the binary format allows for incremental output and parsing of the document without forcing the creation of tables at the beginning of the document the document is consumed incrementally, and directly parsing the data in the document for use by another element in a computer system.
- 21. (original) A computer readable medium according to claim 20, wherein before said parsing, said method includes converting the document to a text format of the tag-based description language.
- 22. (original) A computer readable medium according to claim 20, wherein said receiving includes receiving a document formatted according to a binary format of XML.
- 23. (currently amended) A computing device, comprising:

means for receiving a well-formed document in a text format of a tag-based description language;

means for converting the document to a binary format via tokenization of the tag and

**Application No.:** 09/838,436

Office Action Dated: May 12, 2005

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

attribute names into variable sized numeric tokens, wherein the binary format allows for incremental output and parsing of the document without forcing the creation of tables at the beginning of the document the numeric tokens are in incrementally consumable form; and means for converting the document back to the text format without a loss of fidelity.

- 24. (original) A computing device according to claim 23, wherein said tokenization of attributes enables values natively stored as binary data types to be inserted into the data stream.
- 25. (original) A computing device according to claim 23, wherein said tokenization of tag names includes inserting a name definition construct into the data stream the first time a tag name is encountered for purposes of recreating the tag names by a device that receives the data stream.
- 26. (original) A computing device according to claim 23, said tag-based description language is XML.
- 27. (currently amended) In a system in which a transmitting device transmits in a streaming fashion data formatted according to a tag-based description language, a method for generating a data stream according to a binary format of the tag-based description language, comprising:

for each unique tag name, at the first time a tag name of the data is encountered, tokenizing the tag name into a numeric token and transmitting the token and the text associated with the tag name, wherein the binary format allows for incremental transmitting and parsing of the data without forcing the creation of tables at the beginning of the data the numeric tokens are in incrementally consumable form; and

at any time subsequent to the first time that the tag name of the data is encountered, transmitting the numeric token without the text.

- 28. (original) A method according to claim 27, further comprising: tokenizing attribute names into numeric tokens.
- 29. (canceled)

**Application No.:** 09/838,436

Office Action Dated: May 12, 2005

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

30. (original) A method according to claim 27, wherein said numeric tokens for tag names are variable sized.

31. (original) A method according to claim 28, wherein said numeric tokens for attribute names are variable sized.

- 32. (original) A method according to claim 28, wherein said tokenizing of attributes enables values natively stored as binary data types to be inserted into the data stream.
- 33. (original) A method according to claim 27, wherein the tag-based description language is extensible markup language (XML).
- 34. (original) A method according to claim 28, wherein the tokenizing of the tag and attribute names decreases the time elapsed parsing the data stream by a device that receives the data stream, the time being decreased relative to the parsing of a corresponding text-based format of the tag-based description language.
- 35. (original) A method according to claim 28, wherein the tokenizing of the tag and attribute names decreases overhead incident to formatting data for representation according to the tag-based description language.
- 36. (original) A method according to claim 28, wherein the tokenizing of the tag and attribute names decreases the size of the resulting data file formatted according to the tagbased description language.
- 37. (original) A computer readable medium bearing computer executable instructions for carrying out the method of claim 27.
- 38. (currently amended) A method for generating a data stream according to an XML binary format, comprising:

tokenizing tag names and attribute names into variable sized numeric tokens, wherein the XML binary format allows for incremental output and parsing of the data stream without forcing the creation of tables at the beginning of the stream the numeric tokens are in incrementally consumable form, wherein said tokenizing of attributes enables values natively

Application No.: 09/838,436

Office Action Dated: May 12, 2005

PATENT REPLY FILED UNDER EXPEDITED PROCEDURE PURSUANT TO 37 CFR § 1.116

stored as binary data types to be inserted into the data stream, wherein said tokenizing of tag names includes inserting a name definition construct into the data stream the first time a tag name is encountered for purposes of recreating the tag names by a device that receives the data stream, thereby decreasing parsing time.